

10/735,200  
67097-019  
EH-11084

**AMENDMENTS TO THE DRAWINGS:**

These drawings replace the previously filed drawings. No new matter has been added.

Figure 2 was amended to locate transducers 38 in accordance with figure 3.

Figure 3 was amended to locate the output from the transducers 38 and correct a reference number duplication.

Figure 4 was amended to include the output from the transducers 38.

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Applicant wishes to thank the Examiner for the detailed remarks, the allowance of claims 10-17 and allowability of claims 6, 8 and 9. New claims 18 and 19 are allowable claims 6 and 9 in independent form. Claims 1, 3, 7, and 9 have been amended and claims 4-6 and 8 have been canceled. Accordingly, claims 1-3, 7, 9-20 are pending.

Claims 1, 3, 4 and 5 were rejected under 35 U.S.C. §102(e) as being anticipated by 2003/0221678 A1 to *Kelemencky*. Applicant respectfully traverses this rejection. The Examiner states that *Kelemencky* describes a fuel system comprising a fuel channel which defines an axis (channel 80); and a transducer (26) located adjacent a fuel channel off the axis. Applicant has amended claim 1 to recite that the first and second transducer are located adjacent said fuel channel off said axis and directed towards said fuel channel to direct a signal transverse to and offset said axis. *Kelemencky* cannot meet this limitation. The amended claims are properly allowable.

Claims 1-5 were rejected under 35 USC §103(a) as being unpatentable over US Patent Application Publication No. 2001/0015135A1 to *Chybin et al.* in view of either Japanese Patent No. 05092103A to Oono or US Patent Application Publication No. 2003/0061939A1 to *Hutton et al.* The Examiner admits that *Chybin* does not describe that a first transducer and a second transducer. The Examiner also admits that *Chybin* does not describe the first transducer is angled to a second transducer. In fact, *Chybin* fails completely to disclose or suggest a transducer of any sort. *Chybin* discloses only a system for the conduction of liquid media in which a bubble separating arrangement is formed by a filter device. Although the reference refers to an ultrasound acoustic irradiation device in front of or in the bubble separating arrangement, such a device is, at best, only shown schematically in Figure 2. In other words, the ultrasonic irradiation device is not disclosed in any way which discloses or suggests a particular relationship with the liquid flow as recited by Applicant. Neither of the cited secondary references corrects this deficiency.

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The Examiner suggests that *Oono* describes an ultrasonic defoaming apparatus including a first transducer (ultrasonic vibrator on end of columns 3A-3C) located adjacent a channel (pipe) and off the axis angled to a second transducer (ultrasonic vibrator on end of columns 3A-3C) located adjacent a channel (pipe) and off the axis. At best, *Oono* only discloses that the ultrasonic vibrator is located on the end of columns 3A-3C are directed at the center of pipe 9. Nothing whatsoever in the figures of *Oono* disclose or suggest that the vibrators are located adjacent said fuel channel off said axis and directed toward said fuel channel to direct a signal transverse to and off said axis. That is, the *Oono* vibrators are directed at the centerline of the supply pipe 9 – not off axis.

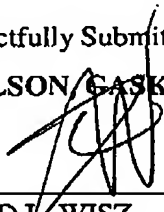
The Examiner further suggests that *Hutton* describes a debubbling apparatus including a first transducer (ultrasonic transducer 38) located adjacent the channel (vessel 14) and off the axis angled to a second transducer (ultrasonic transducer 40) located adjacent the channel (vessel 14) and off the axis. It should be noted that the transducer 40, 38 are located directly in the fuel flow wells 42, 44 (best illustrated in Figure 1) on the axes of the wells (best illustrated in Figures 2 and 3). That is, the fuel flows from the tank directly at and in line with the transducers 38, 40. *Hutton* fails to correct the admitted deficiency of *Chybin* and, even if properly combinable therewith, fails to disclose or suggest the first and second transducer adjacent said fuel channel off said axis and directed toward said fuel channel to direct a signal transverse to and off said axis as recited in the amended claims. The amended claims are properly allowable over the cited references.

Applicant believes that no additional fees or extensions are required; however, should any additional fees or extensions of time be required, the Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson Gaskey & Olds.

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Applicant respectfully submits that this case is in condition for allowance. If the Examiner believes that a telconference will facilitate moving this case forward to being issued, Applicant's representative can be contacted at the number indicated below.

Respectfully Submitted,  
**CARLSON, GASKEY & OLDS, P.C.**

  
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DAVID L. WISZ  
Registration No. 46,350  
Attorneys for Applicant  
400 West Maple, Suite 350  
Birmingham, Michigan 48009  
(248) 988-8360

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